REMARKS

Applicants thank the Examiner for consideration of this application.

Claim amendments

Currently, claims 1-11, 25 and 28-36 are under examination. Applicant has cancelled claims 12-24, 26, 27 and 37-47 which have been withdrawn in response to the Restriction Requirement.

Applicants have amended claim 1 by clarifying that the request from a user to establish a group of users includes a group identifier indenting the group, that a network infrastructure is configured in response to the request to support the group without intervention of information systems personnel, and that the network infrastructure is further configured to support the joining users without intervention of information systems personnel. Support for these amendments can be found in the application as originally filed, e.g., page 8, lines 19-23; page 12, lines 2-3; and the preamble of original claim 1.

Similar amendments are made to claims 25 and 28.

Applicants have amended claim 7 in view of the amendment to claim 1.

Applicants have amended claims 9 and 11 to correct articles for the terms which did not have proper antecedent basis.

Applicants have amended claim 34 to recite a switch commander. Support for this claim can be found in the application as originally filed, e.g., pages 15 and 16 of the specification and Figure 4.

Applicants have amended claims 35 and 36 in view of the amendments to their parent claim 28.

Gowling Lafleur Henderson LLP   Page 7

PAGE 9/16 * RCVD AT 3/30/2006 12:14:13 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/21 * DNIS:2738300 * CSID: * DURATION (mm-ss):04-08

It is respectfully submitted that no new matter has been introduced into the application by these amendments. Entry of the amendments is respectfully requested.

Rejection under 35 USC 112, first paragraph

The Examiner has objected to claim 25 under 35 USC 112, first paragraph, alleging that the specification does not indicate how or what "computer instructions" are described or used for this method. Applicants respectfully request reconsideration of this rejection for the reasons set out below.

The specification as originally filed describes that the components of the system may be hardware or software implemented, e.g., page 12, line 6, and some components are described being not associated with any physical device, e.g., page 10, lines 24-25. Those skilled in the art, upon reading the specification, would clearly understand that the method as recited in amended claim 25 can be implemented by software, i.e., computer instructions. In the embodiment described in the specification on pages 15 and 16 referring to Figure 4, the steps recited in amended claim 25 are implemented by the registration driver 904 and the switch commander 917. These components can be implemented by software including computer instructions.

Therefore, Applicants trust that amended claim 25 comply with the requirements under 35 USC 112, first paragraph.

Rejection under 35 USC 112, second paragraph

The Examiner has objected to claim 11 for insufficient antecedent basis for "the default state". Applicants have amended claim 11 by changing "the default state" to --a default state--, as suggested by the Examiner.

The Examiner has objected to claim 25, alleging that it is not clear which computer instructions the Applicant is referring to. Applicants have amended claim 25 by incorporating the steps of claim 1 as amended. Applicants regard as the invention

the computer instructions that carry out these steps. As discussed above, Applicants trust that amended claim 25 is clear and comply with requirements under 35 USC 112, second paragraph.

The Examiner has further objected to claim 25 for insufficient antecedent basis for "the computer instructions". Applicants have amended claim 25 by changing "the computer instructions" to --computer instructions--.

Rejection under 35 USC 103 - claims 1-4, 7-11 and 25

The Examiner has rejected claims 1-4, 7-11 and 25 under 35 USC 103(a), alleging that these claims are unpatentable over Gage et al (US Patent 6,035,405; hereinafter called "Gage") in view of Barkai et al (US Patent 6,188,691; hereinafter called "Barkai"). Applicants respectfully request reconsideration of the rejection for the reasons set out below.

<u>Claim 1</u>

The invention as recited in amended claim 1 allows a user to create a group of users, i.e., a group VLAN on a network. The creation of a group of users includes sending a request including a group identifier identifying the group. The group identifier may include a group name and password as recited in amended claim 7. The invention as recited in amended claim 1 allows other users to join the group according to the group identifier. A network infrastructure are configured to support the group of users and the joining users without intervention of information systems personnel. Thus, there is no information systems personnel required for the creation of a group of users (group VLAN), entering a group VLAN, leaving a group VLAN, or deleting a group VLAN. The VLAN functions can be initiated on-demand by the users.

In contrast, neither Gage nor Barkai teach or suggest such a method.

Gage discloses a method for securely adding a new end station to a LAN segmented into a number of VLANs. The VLANs disclosed by Gage are pre-defined by a system

administrator. In Gage's system, a LAN emulation configuration server (LECS) 601 contains an internal database storing a record of each VLAN and the end stations permitted to join the VLANs (column 4, lines 51-53).

Gage does not disclose or suggest the step of receiving a request from a user to establish a group of users, as indicated by the Examiner. This is because Gage does not allow users to create a VLAN, and thus there is no motivation to receive such a request from users. Gage describes user requests to join secure groups using challenge-response mechanisms. These challenge-response pairs are not defined by the users, therefore the groups cannot be created by the users. Also, Gage does not disclose or suggest configuration of a network infrastructure in response to a user request to establish a group of users or VLAN, or resolving the group based on predetermined rules.

The Examiner has cited to Barkai to show the claimed steps which are missing from Gage.

Barkai discloses a method of defining LAN multicast traffic flows. Barkai uses switching devices to permit an administrator to define a VLAN (column 2, lines 26-30). The administrator assigns an IP multicast address to, e.g., a specific video channel or a video conference, and the network management system (NMS) declares a session VLAN (column 2, lines 35-40). Barkai states that "The user or administrator has the capability of adding and deleting segments from the VLAN thus created." (column 2 lines 44-46, underline added). Barkai allows a user only to add and remove ports from a VLAN which has been otherwise defined by an administrator. Thus, according to Barkai, VLANs are pre-created by the administrator, and must already exist in some form on the network management system in order for users to manipulate them. Similar to Gage, Barkai does not disclose or suggest the step of receiving a request from a user to establish a group of users. Also, Barkai does not disclose or suggest configuration of a network infrastructure to create a group of users or VLAN in response to user's VLAN creation

request. Since Barkai does not allow users to create a VLAN, there is no motivation to receive a user request to establish a VLAN or configure a network infrastructure in response to such a user request.

Both Gage and Barkai fail to disclose or suggest allowing a user to establish a group of users, or VLAN. Accordingly, even a person skilled in the art attempts to combine Gage and Barkai, he would still provide VLANs which are pre-created by a system administrator or computer network personnel, and he would not allow users to create VLANs. He would still fail to create a VLAN based on a request from a user to establish a group of users.

Therefore, Applicants respectfully submit that claim 1 as amended is unobvious over Gage and Barkai.

Claims 2–4 and 7-11
Claims 2-4 and 7-11 depend on claim 1. Accordingly, Applicants trust that these claims are also unobvious over Gage and Barkai.

Claim 25
Claim 25 as amended now recites the steps recited in amended claim 1. Accordingly, for the same reasons discussed for claim 1, Applicants trust that amended claim 25 is also unobvious over Gage and Barkai.

Therefore, it is respectfully submitted that claims 1-4, 7-11 and 25 as amended comply with the requirements under 35 USC 103.

Rejection under 35 USC 103 - claims 5 and 6
The Examiner has rejected claims 5 and 6 under 35 USC 103(a), alleging that these claims are unpatentable over Gage in view of Barkai and Yuasa et al (US Patent 6,085,238; hereinafter "Yuasa").

Gowling Lafleur Henderson LLP   Page 11

PAGE 13/16 * RCVD AT 3/30/2006 12:14:13 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/21 * DNIS:2738300 * CSID: * DURATION (mm-ss):04-08

Claims 5 and 6 depend on claim 1. Accordingly, Applicants trust that these claims are also unobvious over Gage and Barkai.

In addition, Yuasa mentions that LANs can be configured to use 802.1Q VLANs. However, Yuasa does not disclose or suggest creation of VLAN in response to a user request.

Therefore, it is respectfully submitted that claims 5 and 6 are unobvious over Gage, Barkai and Yuasa and comply with the requirements under 35 USC 103.

Rejection under 35 USC 103 - claims 28-35

The Examiner has rejected claims 28-35 under 35 USC 103(a), alleging that these claims are unpatentable over Gage in view of Yuasa. Applicants respectfully request reconsideration of the rejection for the reasons set out below.

Claim 28

The server according to claim 28 as amended comprises a registration module, a registration driver, a module to assign VLAN tags, and a packet driver module. The registration module receives from a user a request to create a group of users, the request including a group identifier identifies a group of users, i.e., VLAN. Also, the registration module receives from other users a request to join the group using the group identifier. The registration driver registers the user and the other users to access the group of users and maintains relevant information according to the group identifier in response to the request from the user without intervention of information systems personnel. Thus, the server allows users to create or join a group of users, i.e., VLAN, and receive or send packets to communicate through the VLAN.

In contrast, neither Gage nor Yuasa teach or suggest such a server. As discussed above, both Gage and Yuasa fail to teach or suggest a component that receives a user request to create a group of users and registers a user to access a VLAN or

maintains relevant information in response to such a user request without intervention of information systems personnel.

Accordingly, Applicants respectfully submit that the invention as recited in amended claim 28 has patentably distinguished over Gage and Yuasa.

Claims 29-35
Claims 29-35 depend on amended claim 28. Accordingly, Applicants trust that these claims are also unobvious and patentably distinguishable over Gage and Yuasa.

Therefore, it is respectfully submitted that claims 28-35 are unobvious over Gage and Yuasa and comply with the requirements under 35 USC 103.

Rejection under 35 USC 103 - claim 36
The Examiner has rejected claim 36 under 35 USC 103(a), alleging that this claim is unpatentable over Gage in view of Yuasa and Barkai.

Claim 36 depends on amended claim 28. Accordingly, Applicants trust that this claim is also unobvious and patentably distinguishable over Gage, Barkai and Yuasa, as discussed above. Especially, in Barkai, only a network administrator can undefine or delete a group. Barkai's users can only remove segments of a network from a group, but cannot delete the group.

Therefore, it is respectfully submitted that claim 36 is unobvious over Gage, Barkai and Yuasa and comply with the requirements under 35 USC 103.

It is submitted that Applicants have completely responded to the Office Action. Applicants submit that the currently pending claims as amended are in condition for allowance, which action is earnestly solicited.

Respectfully submitted,

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